

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.	: 09/506,767	Confirmation No.	8104
Applicant	: Craig Link et al.		
Filed	: 2/18/2000		
Title	: System and Method for Producing Unique Account Names		
Group Art Unit	: 3691		
Examiner	: Olabode Akintola		
Docket No.	: MFCP.68211		
Customer No.	: 45809		

Via EFS-Web Submission

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 C.F.R. § 1.131

We, Craig A. Link, Nicholas Berry, and Dean M. Pachosa, declare that:

- 1) We are the inventors of the subject matter described and claimed in the patent application identified above.
- 2) Prior to April 1, 1999, we had completed (conceived and reduced to practice) the invention as described and claimed in the subject application in the United States, as evidenced by the following:
 - a) Prior to April 1, 1999, after we had earlier conceived the idea of producing unique account names as described and claimed in the subject application, the invention was reduced to practice and included in the 1999 Week 13 river release of the MSN Gaming Zone, an online gaming service.
 - b) A copy of a "bug" that tracked the 1999 Week 13 river release of the MSN Gaming Zone is attached hereto as Exhibit A. Our product team had a weekly release system for the MSN Gaming Zone, which was called "The River". The schedule was set by numerical

week. As shown in Exhibit A, the "Fix By" date was "13 WK," which stands for week 13. In 1999, week 13 was Monday, March 22nd through Friday, March 26th. As also shown in Exhibit A, the "bug" was closed as shipped and verified on "the river" on March 24, 1999.

- c) Implemented code corresponding with the 1999 Week 13 river release was included in release Z5.5. The Z5.5 release was described in detail within a Patent "Predisclosure" Document that was completed on March 29, 1999 in preparation for an invention disclosure meeting. The Predisclosure Document shows that the invention was reduced to practice as evidenced by the statement that the described invention is currently being used by "Zone Z5.5 release" dated 3/25/1999. *See Exhibit B Predisclosure Document page 7.* The Predisclosure Document describes embodiments of the invention in detail. Details of the embodiments that became part of the claims include, but are not limited to:
- i) Receiving a proposed account name from a user. *See Exhibit B pg 2, "the user requests a name."*
 - ii) Determining if the account name is unique. *See Exhibit B pg 2, "if the name is not already taken."*
 - iii) If the proposed account name is not unique, proposing a set of unique account names to the user to chose from. *See Exhibit B pg 2, "a number of suggested names are returned to the user."*
 - iv) Generating the system proposed account names by adding one or more of the following to at least a stem of the user proposed account name:
 - (1) A single digit number. *See Exhibit B pg 3, "if the name is not unique an attempt is made to append digits to the name."*

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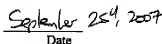
- (2) A “_” plus a single digit number. *See* Exhibit B pg 3, “number combined with an underscore character is free.”
- (3) An adjective. *See* Exhibit B pg 3, “create a unique name by appending a randomly chosen adjective.”
- (4) A noun. *See* Exhibit B pg 2, “the system chooses random adjectives, nouns, . . .”
- (5) A combination of a noun and an adjective. *See* Exhibit B pg 4, “the rest of the suggestion list is made up by adding enough randomly generated combinations of adjectives and nouns.”
- 3) We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the patent application or any patent issued thereon.

Craig A. Link

Date



Nicholas Berry



Date September 25th, 2007

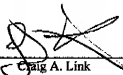
Dean M. Pachosa

Date

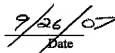
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Nicholas Berry

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Craig A. Link

Date

Nicholas Berry

Date

Dean M. Pachosa
Dean M. Pachosa

9-27-07
Date

EXHIBIT A

ID 3938
Title security db - sp_get_member_id needs to provide more useful suggestions
Path \Infrastructure\SQL Server\Security

Bug ID --
3938

Status --
Status Closed
Assigned to Closed
Issue type Work Item
Severity 2
Priority 1
Date 7/29/2002
By jessmc

Opened --
Date 3/17/1999
By craigli
Build 00.00.00.0000
How found Act of the Mighty Craig

Resolved --
Date 3/17/1999
By craigli
Resolution Fixed
Build 00.00.00.0000

Closed --
Date 3/24/1999
By kevinmcp

Project --
Fix By 13 WK MA
Release Content

Estimates --
Project_Content

Description --
7/25/2002 6:26 PM Upgraded from ZonePlatform - bug 3938 by kevinmcp (PS Administrators) (Bug 3938 - Zone Bugs)
===== Opened by craigli on 03/17/99; AssignedTo = craigli; Priority = 1 =====
since the change to support the Z6 names suggestions from the DB point of view is easily pluggable into the river we should release it asap.
The changes require adding 2 new tables to the security db for the adj and noun suggestions. Additionally, the sp_get_member_id sp is modified to take advantage of these tables.

===== Resolved Fixed by craigli in 00.00.00.0000 on 03/17/99; AssignedTo = kevinmcp =====
===== Closed by kevinmcp on 03/24/99; AssignedTo = Closed =====
verified on the river
7/25/2002 4:18 AM Edited by jessmc
7/26/2002 7:50 AM Edited by jessmc
7/29/2002 2:59 PM Edited by jessmc

EXHIBIT B

PATENT "PREDISCLOSURE" DOCUMENT

Title of Invention: System and method for producing unique account names

Date: 3/29/1999

Author(s) of this Document: Nick Berry

Names of Potential Inventors: Craig Link, Nick Berry, Dean Pachosa

1. Introduction

The system described in this invention attempts to produce unique user account names. Unique account user names are often required by online and/or Internet services to uniquely identify users visiting a web site. By providing users unique names, users are able to form a community and develop persistent personas for the user names. One such service is the MSN Gaming Zone, an online gaming service provided by Microsoft. This invention can produce names similar to a requested name if the requested name has already been, or can suggest random names for users who cannot think of a suitable account name.

Whilst the examples in this document and its application are focussed on providing entertaining names for a gaming service, through the use of more general word lists it could be adopted in more 'serious' applications.

2. Motivation for the Invention:

The MSN Gaming Zone ('Zone') is an online gaming service. Users logon to this service to play games with other individuals on the Internet. Each person who plays on the Gaming Zone requires a username.

The Zone requires that each username be unique. This uniqueness provides benefits:

- Uniqueness provides users on the Zone a persistent handle to refer to others by. Once you have met someone, you always know how to identify him or her in the future.
- The username is used as primary key for databases internally to the Zone (to store score information, billing details and to allow maintenance of accounts)

The Zone already has millions of registered users. Because of this fact, many of the common or popular names have already been taken. (In fact, all the common English names, words, characters, famous people, characters have long been taken). If a user tries to register their name, e.g. *Nick*, the chances are that this name has been taken a long time ago.

The aims of this invention are:

- To suggest 'sensible' alternative usernames if the requested name has been taken. (Here sensible means names that have a common stem with the originally requested word).
- In addition, to provide some randomly generated, easy to remember and fun names that would be suitable to be used as usernames in an online gaming site. These names should be memorable and make sense, not just some random combination of letter and numbers.
- If the user cannot think of a suitable on-line name, this system can generate a small set of randomly chosen names that can be used by the user for registration. These randomly selected names can be used as is, or be modified by a user (the names might be catalysts that jump-start the imagination of users who could not initially think of a suitable name).
- This system is designed to minimize, as much as possible, the number of database accesses to produce a list of alternative names. With potentially dozens of signups occurring a

second, the system needs to generate responses quickly, and this equates to minimizing the number of database checks needed to be done.

3. Description of the Invention:

The system uses a cascading set of rules to create a result set of possible names – If the name originally requested by the user is not available, the aim is to return a small selection of alternatives. The rules described below identify how these alternatives are generated.

In the current implementation, the user requests a name. If the name is not already taken, then the user is free to claim it. If it has been taken, a number (currently 5) of suggested names are returned to the user – this list will be a mixture of derived names and randomly chosen names. If the user does not suggest a starting name, a set of randomly chosen names are suggested to the user.

The system chooses random adjectives, nouns and numbers and combines these with each other (and the originally requested word) to create the alternative suggestions.

3.1. Parameters

In the descriptions below, the parameters defining the number of retries attempted at each suggestion stage and the number of alternatives returned, are the values currently implemented live on the Zone. They can be easily changed.

At the current time, the maximum permitted length of a username is 15 characters. All the suggestion systems below confirm that this length is not exceeded.

3.2. Word Database

The system requires a database of words to randomly pick from. These words are classified into two tables: Adjectives and Nouns. Note: The words used don't have to be adjectives or nouns. Specially the adjectives table consist of words (adjectives, adverbs, etc) which may prefix words from the nouns table.

4. Rules

The following cascading rules are applied in order described below. The aim is to produce 5 alternative suggestions. To stop lock-up conditions (constantly running in loops looking for possible free names), each rule has maximum iteration attempt. If no suitable free name has been found after this maximum number of attempts, control passes to the next rule.

4.1. Is the requested name unique?

The first check made is to see if the name requested is genuinely unique. If so, the user can have the name they requested.

e.g. If the user requested *QW123ERT*, there is a good chance this name had not be used by anyone else. However, if the user requested a popular name like *Nick*, this will almost certainly have been taken.

4.2. Ordinal Values

If the name is not unique, an attempt is made to append digits to the end of the name.

Because of the millions of user names in the database, single digit ordinals are 'special', and priority is given to trying to find free name by adding a single digit. It might not be possible to claim *Nick*, but it might be possible to get *Nick2* or maybe *Nick_3*.

The following loop is run until either two suggestions have been found, or until all the single digits have been checked.

First, the code starts with a seed of the single digit '0'. This seed is appended to the end of the suggested name, and a check made to see if this name is free. If it is *not* free, an attempt is made to see if this name and number when combined with an underscore character is free. The seed is then incremented by 1 and the loop repeated (unless two suggestions have been found).

e.g. If the user requested the name *Nick*, and this was taken, the code would attempt to find:

Nick0, Nick_0, Nick1, Nick_1, Nick2, Nick_2 Nick9, Nick_9

Note – There is a subtle aspect in the code here. The name with the appended underscore and digit (e.g. *Nick_7*) is only checked if the name generated by appending the digit on its own is taken. In this way, preference is given to generating names without underscores, and also two very similar names are not returned in the list to the user. (e.g. If *Nick3* is returned in the list as free name, *Nick_3* would not appear in the list as another free alternative, because the second check is only performed if the first check fails).

If the single ordinal digit searching does not produce two free names, the system is repeated, but this time using a random seed. This seed is a randomly generated (up to 3) digit number. A check is made first for the name+number, and again, only if this is taken, a check is made for name+underscore+number. e.g. *Nick134, Nick676, Nick_100, Nick343 ...*

This above loop is run up to 15 times (or until 2 free names have been found)

4.3. Adjective addition

Next an attempt is made to create a unique name by appending a randomly chosen adjective to the front of the requested name. The adjective is randomly selected from the adjective table.

This loop is tried up to 10 times, but as soon as one solution is found, the loop is exited. We are only looking for a maximum of one suggestion made by pairing and adjective and a name.

A similar system is applied as above: adj+name is searched, and only if this name is taken is adjective+underscore+name searched.

To make the distinction between the words obvious, the first character of the original name is forced to upper case.

Possible examples of names generated by this rule are:

AngryNick, Red_Nick, MetalNick, Giant_Nick

4.4. Randomly Chosen Adjective and Noun pairings

Finally, the rest of the suggestion list is made up by adding enough randomly generated combinations of adjectives and nouns to produce a suggestion list with a total of 5 suggestions. (However, this rule runs a maximum of 15 times – even if enough suggestions have not been proposed to make a total of 5 names, the loop is terminated – It is possible to have a suggested set returned that contains less than 5 suggestions).

This rule creates names by choosing a random adjective from the table of words, and a random noun. These two words are combined together, and a check made for uniqueness. If the name is not unique, an attempt is made by combining adjective+underscore+noun,

These random names are proposed to give to user some suggestions of other names they might wish to use if they do not want a name based on their requested name.

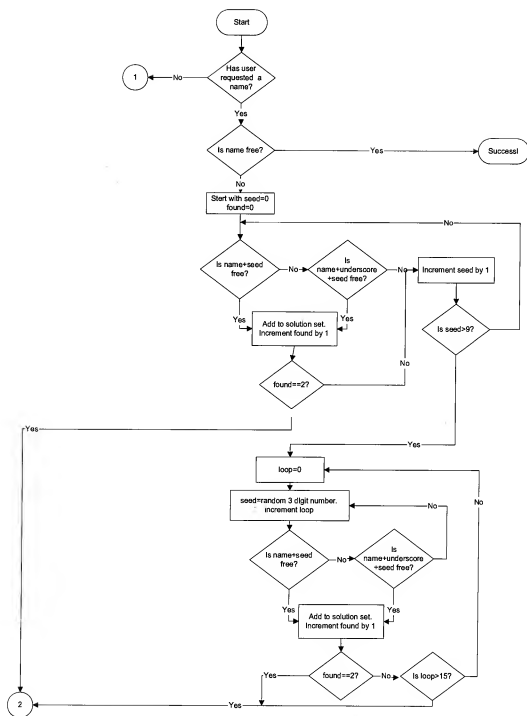
Possible names generated by this rule are:

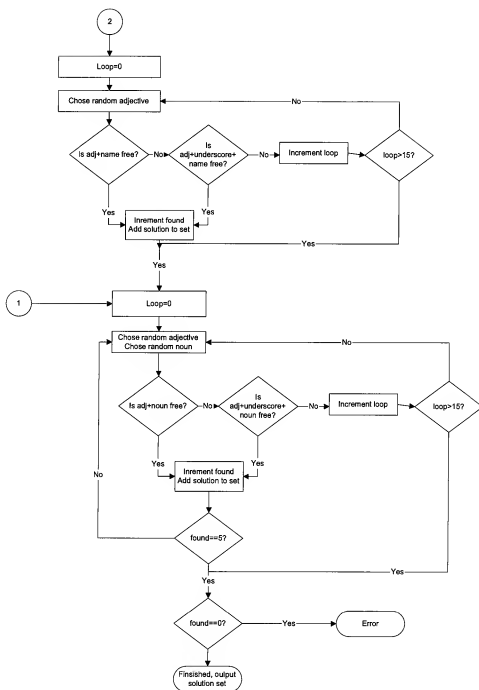
SilverCrown, Blue_Bug, PrettyFish, SilentPillow, Shiny_Table

5. No requested name

If the user did not enter a requested name (instead, wanted the computer to suggest random names for him), only the last rule is run. This will generate randomly chosen word combinations only.

6. Diagrams and Flow Charts





7. Additional Information:

- List the names of any people who contributed to the invention.

Nick Berry (Program Manager) Idea

Craig Link (Developer)

Idea, refinement and implementation

Dean Pachosa (Developer) Idea

- *List any earlier, current or anticipated MS products that may use your invention:*

Zone Z5.5 release currently using this system, RTW 3/25/1999